

MAPublisher 6.1—Presentation Exercise

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The following is a summary of the Avenza MAPublisher presentation given at the Digital Mapping Techniques 2005 conference in Baton Rouge, LA, on April 26, 2005. As many of those present were either already users of MAPublisher or were familiar with it in one way or another, it was decided that a short presentation outlining some of the newest features in MAPublisher 6.1, in the form of a small forum-specific exercise would serve everyone well. It is assumed that users of this Exercise are familiar with Adobe Illustrator. All data files used in these examples can be found at ftp://ftp.avenza.com/pub/misc/dmt05_files.zip.

DATA SOURCE: Geologic data mapped by the National Wetlands Research Center for the Louisiana area (http://sabdata.cr.usgs.gov/sabnet_pub/pub_sab_app.aspx?prodid=1403), in ArcInfo (v.7.0.4) export format. Map projection was Datum NAD27, Projection UTM, Feature Polygon, Units Meters, Resolution 15 Meters.

PART 1: IMPORTING THE DATA

1. Create a new Adobe Illustrator document.
Custom > Landscape format
17W x 15H
Reset Rulers

How to Import Data in a Similar Projection/Co-ordinate System:

2. (SIMPLE IMPORT) Import the “gelogicpoly.shp” shapefile from the “projected” data folder and make the line 50% blk, 0.25pts wide.

Note: auto recognition of projection/co-ordinate system (Nad 27 Zone 15 North, Meter). Data will import with current fill and stroke properties as currently set in Illustrator.

3. (SIMPLE IMPORT) Import the “geologypoint.shp” shapefile from the “projected” data folder using the “Add To:” Destination Map View and choosing the “gelogicpoly” Map View.

Note: this will import the 2nd file into the existing Map View and register it to the existing data, which is desirable as both files are in the same projection. The point data will import as the default of a small solid black symbol.

How to Rescale and Reposition all Data Located Under a Map View:

4. (EDIT MAP VIEW) Open “gelogicpoly” Map View and change the name of the View to “Louisiana” and enter a new scale value of 1: 1,300,000 choosing the LL center justification from the “LL Corner” control widget.

Note: The Map View is renamed and the map data is rescaled and moved to the left centre of the art board.

How to Import Multiple Data Files in a Different Coordinate System and Reproject to Match That of Existing Data:

5. (ADVANCED IMPORT) Select both the “rivers.shp” & “rrline_arc.shp” shapefiles from folders under the “unprojected” data folder, choosing the “Use existing” option for the Destination Map View. Specify the “Louisiana” Map View as the choice. Make the rivers blue 0.25pts wide and the rrline brown, 0.75 pts wide.

Note: this will import both the unprojected “river” and “rrline” shapefiles and reproject them to match the projection and locational settings used in the “Louisiana” Map View. The data is imported and reprojected into the chosen view.

How to Import Data in a Different Coordinate System and Reproject to Match That of Existing Data By Dragging the Data From One View to Another:

6. (ADVANCED IMPORT) Import the “rdline.shp” shapefile from the “roads” folder within the “unprojected” data folder using the “New based on” option for the Destination Map View. Make rdline black, 1.5 pts wide.

Note: New Map View is created (latitude/longitude_Degree) and the states layer is contained in it.

7. (OPEN MAP VIEW - "rdline") Open the view to display that the view is in LatLong format.

8. (REPROJECT DATA – drag & drop) Select the "rdline" data layer in the Map Views palette and drag and drop it into the "Louisiana" view. Delete the now empty "rdline" view.

Note: data is reprojected to (Nad 27 Zone 15 North, Meter) from (latitude/longitude_Degree) and is added to the view.

How to Import Data and Easily Create an Inset Map Based on an Existing Views Projection:

9. (SIMPLE IMPORT) Import the "states.shp" shapefile from the "inset – usa" map folder found within the "unprojected" data folder, using the "New based on" option for the Destination Map View. Data is fit to page based on new View. Double click on the "States" View to open it. Enable the "same as" option at the bottom of the dialog and choose "Louisiana".

Note: Data is reprojected to same (NAD 27 Zone 15 North, Meter).

Rename the view to "Inset" and enter a scale value of 1: 40,000,000, choosing the top right justification from the "LL Corner" control widget.

Note: User may move inset around by moving the green data extents box in the Map View dialog.

PART 2: STYLIZING DATA

10. (OPEN FILE) Open "Louisiana.ai" file (file contains all imported data above and has been slightly color modified).

11. (OPEN STYLE FILE) Open the "samplestyles.ai" file located in the "USGS KEYNOTE\Data\styles and symbol samples" folder.

12. (LOAD STYLE FILE) Load the "samplestyles.ai" file located in the "USGS KEYNOTE\Data\styles and symbol samples" folder into the "Louisiana.ai" file.

Note: Drag these user created styles into the current default style list so that they can be used in stylesheets.

13. (CREATE STYLESHEET AREA) In the Map Style Sheet Palette create a new stylesheet named "geologic" of type "Area" and drag the "geologicalpoly_area" layer under this stylesheet.

Note: Use the "Geologic Code" attribute column to assign values in the stylesheets. The attribute column is automatically remembered when assigning. Use the category names listed on the right side of the map and sequentially assign the attribute to the accompanying style until complete, then click "Apply".

14. (CREATE STYLESHEET POINT) First load the "samplesymbols" symbol set into the AI document. In the Map Style Sheet Palette create a new stylesheet named "symbols" of type "Point" and drag the "geologypoint_point" layer under this stylesheet. Now assign the symbols from ECF-EJ-L. Click Apply and Ok.

Note: Use the "Geology_CO" attribute column to assign values in the point stylesheets. The symbols being assigned are those in the current symbol library and they can be scaled.

PART 3: MANIPULATING POINT DATA

How to Rotate Point Data Based on Attribute Values as Well as Joining Point Data Based on Attribute Values:

15. (ROTATE SYMBOLOGY- Based on attribute column) Make the "geologypoint" layer active in the Illustrator doc and lock all other layers. Select all on layer. Open Edit Map Columns and set the following options:

Layer->"geologypoint"
Expression Column->Rotate_By
Result Type->Properties
Result Property->Rotation
Click Ok

Note: The symbols rotate according to attribute value.

16. (IMPORT POINT – GPS WAYPOINTS) Continue using the "Louisiana.ai" file. Use SIMPLE IMPORT to import the "gpspath.txt" file located in the following location USGS KEYNOTE\Data\Louisiana\Unprojected\gps waypoint.

Import this file as a new Map View.

Assign "SOURCE PROJECTION" as "WGS84 Lat-Long" click "Ok"

Now drag this layer into the "LOUISIANA" Map View (data gets reprojected)

Now while points selected rescale to 35% of original size (Transform Each)

Zoom in to show point locations

Click Apply and Ok

Note: Use the "Geology_CO" attribute column to assign value to the point stylesheets. The symbols being assigned are those in the current symbol library and they can be scaled.

17. (JOIN POINTS – GPS WAYPOINTS) Select all the points on the “gpspath_point” layer and then open the Join Points dialog (Filter->Map Lines->Join Points) and make the following settings:

Input Layer->“gpspathpoint”

Output Layer->New layer

Group By->Group

Sort By->Sequence

Click Ok (points are joined)

Use Object->Path->Simplify to experiment with smoothing the line.

18. (OPEN FINISHED FILE) Open the “Louisianafinal” file and view finished map sample.